



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/665,067 | 09/17/2003 | Jose I. Suarez | CM03347JD01 | 5493 |

22917 7590 07/10/2006

MOTOROLA, INC.
1303 EAST ALGONQUIN ROAD
IL01/3RD
SCHAUMBURG, IL 60196

| |
|----------|
| EXAMINER |
|----------|

SHAH, UTPAL D

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2624

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/665,067 | SUAREZ ET AL. | |
| | Examiner | Art Unit | |
| | Utpal D. Shah | 2624 | |

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 13-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

In regards to claim 1, the applicant is notified that the limitation in line 2, "the input digital signal" has no antecedent basis, since the preamble recites a different limitation "an input data signal". Appropriate action is needed.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 5,481,308 by Hartung et al. (Hartung).

3. In regards to claim 1, Hartung discloses a method for encoding an input data signal comprising of the steps of (fig 1):

performing a signal decomposition on the input digital signal to obtain a transformation of said input signal; (fig. 3, shows decomposing and outputting the image data.)

forming a plurality of subsets of the transformed data signal corresponding to a set of regions of the data set by grouping the transformed data; (fig. 1,3-4 and 8-9, show selecting many subsets of transformed data.)

and calculating a measure of activity corresponding to each of the plurality of subsets of the transformed data. (fig. 1,3-4 and 8-9, Hartung discloses measuring spatial activity and variation in different ways to adaptively encode the image.)

4. In regards to claim 2, Hartung discloses further comprising a step of: selecting a set of regions based on the measure of activity. (fig. 1, 3-4 and 8-9, Hartung discloses selecting the set of regions.)

5. In regards to claim 3, Hartung discloses further comprising a step of: ordering the set of regions based on the magnitude of the measure of activity corresponding to each of the plurality of subsets of the transformed data. (fig. 1,3-4 and 8-9, Hartung discloses that the data is ordered in a number of different ways for adaptive image coding.)

6. In regards to claim 4, Hartung discloses further comprising a step of: determining whether to extract a subset of the transformed data of spatially correlated regions on the basis of the measure of activity; and extracting such subset from the transformed data. (fig. 1,3-4 and 8-9, Hartung clearly shows grouping of subsets which are correlated by at least time, space, and/or frequency.)

7. In regards to claim 5, Hartung discloses where the set of transformed data corresponds to the sub-banded output of a multi-level wavelet transformation. (fig. 1,3-4 and 8-9)

8. In regards to claim 6, Hartung discloses further comprising a step of: selecting a set of regions, corresponding to the lowest frequency sub-band, sub-band 0, based on the measure of activity. (fig. 9, Hartung discloses selecting regions in lowest frequency sub-band.)

9. In regards to claim 7, Hartung discloses further comprising a step of: ordering the set of regions based on the magnitude of the measure of activity. (fig. 1,3-4 and 8-9, Hartung discloses that the data is ordered in a number of different ways for adaptive image coding.)

10. In regards to claim 8, Hartung discloses further comprising the steps of:
selecting a set of regions based on the measure of activity for the three sub-bands spatially adjacent to the lowest frequency sub-band; ordering the set of regions corresponding to each of the three sub-bands based on the magnitude of the measure of activity; and using the measure of activity to determine whether to extract a subset of the transformed data in the regions corresponding to their spatially correlated higher frequency sub-bands. (fig. 1,3-4 and 8-9, Hartung clearly shows grouping of subsets which are correlated by at least time, space, and/or frequency.)

11. In regards to claim 9, Hartung discloses further comprising the step of: ordering the set of regions corresponding to the spatially correlated higher frequency sub-bands

based on the magnitude of the measure of activity. (fig. 1,3-4 and 8-9, Hartung discloses that the data is ordered in a number of different ways for adaptive image coding.)

12. In regards to claim 10, Hartung discloses further comprising the step of: selecting the set of regions based on either the channel bandwidth, or bit rate, or image quality, or image resolution. (col. 1, lines 16-20)

13. In regards to claim 11, Hartung discloses a method of processing a set of transformed input data outputted by a wavelet filter bank decomposer comprising the steps of (fig. 1):

receiving a set of transformed data input; computing a set of measures of variation corresponding to as set of selected areas of a transformed input data; (. fig. 1,3-4 and 8-9, shows decomposing and outputting the image data. Hartung also discloses measuring spatial activity and variation in different ways to adaptively encode the image.)

selecting a subset of the set of areas of the transformed input data on the basis of the set of measures of variation; (fig. 1, 3-4 and 8-9, Hartung discloses selecting the set of regions.)

determining an ordering for the subset of the set of areas on the basis of the set of measures of variation; and grouping a set of subsets of the set of transformed input data on the basis of the set of measures of spatially correlated sub-bands. (fig. 1,3-4

and 8-9, Hartung discloses that the data is ordered in a number of different ways for adaptive image coding. Hartung clearly shows grouping of subsets which are correlated by at least time, space, and/or frequency.)

14. In regards to claim 12, Hartung discloses further comprising the step of: transmitting the set of subsets of the set of transformed data coefficients. (fig. 4, Hartung discloses a channel for transmission of data.)

Allowable Subject Matter

15. Claims 13-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regards to claim 13, the closest prior art Hartung discloses "selecting a plurality of blocks of transformed input data corresponding to the set of all sub-bands; and" (fig. 1,3-4 and 8-9, Hartung discloses that the data is ordered in a number of different ways for adaptive image coding.). However, Hartung fails to disclose the limitations "forming norm planes of plurality of blocks of transformed input data on the basis of the set of measures of variations". It is for this reason that claim 13 would be allowable if rewritten in independent form.

Claims 14-19 are allowed for being dependent on claim 13.

Conclusion

Examiner note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teaching for the art and are applied to the specific limitations within the individual claim, other passages and figures may applied as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potential teaching all or part of the claimed invention, as well as the context of the a passage as taught by the prior art or disclosed by the examiner.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Utpal D. Shah whose telephone number is 571-272-8568. The examiner can normally be reached on M-F (9 AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Utpal Shah
AU - 2624
Phone # 571-272-8568



**SAMIR AHMED
PRIMARY EXAMINER**